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Beginning in the mid-1990s, the Canadian welfare state's devolutionary transformation ushered in an era which potentially increased the importance of social capital and human capital as mechanisms for promoting socio-economic advancement. In this study, the authors analyze data from Canada's General Social Survey to assess how social capital and human capital influence the reported incomes of the Canadian population. The primary findings were that both social and human capital influenced income and that human capital had a larger effect on economic mobility than did social capital. The implications the study's findings have for policy and programmatic interventions within the 21st century knowledge-based economy are discussed, and future studies which can further understanding in the area of social and human capital are also proposed.

Key words: *social capital, human capital, income, social networks, social support, education*

The concept of social capital arose as an extension of human capital, that is, education levels and job skills that individuals offer to their prospective or actual employers. As an asset, social capital, like human capital, is considered to have potential for translating into productivity within the labor market, but it specifically refers to social relationships rather than educational attainment or technical expertise (Harris, 1993; Putnam, 1995; Schneider, 2006). In the seminal essay *Social*

Capital in the Creation of Human Capital, Coleman (1988) proposes that social capital, like physical and human capital, "is productive, making possible the achievement of certain ends that in its absence would not be possible" (p. S98). Reflecting on its relational nature, Schneider (2002) refers to social capital as "social relationships and patterns of trust which enable people to gain access to resources such as government services or jobs" (p. 36), while Li (2004) suggests that social capital refers to the social relationships which people try to cultivate within various social settings as well as the "potential resources of these relationships that people may use to pursue social and economic goals" (p. 172).

In accord with the above definitions, there is considerable evidence that the accumulation of social capital is associated with positive socio-economic outcomes. For instance, higher levels of social capital have boosted employment opportunities and incomes, reduced poverty and work-family conflict, increased savings and assets, and improved access to credit (Brisson, 2009; George & Chaze, 2009; Yusuf, 2008). In a similar vein, a positive link between social capital and career advancement and the adoption of technology has also been detected (Manturuk, Lindblad, & Quercia, 2009).

Social capital is also associated with positive outcomes regarding welfare reform efforts, as the acquisition of social capital can assist in low-income persons' efforts to exit welfare and secure employment and valuable services such as child care and health care (Lévesque, 2005; Parisi, McLaughlin, Grice, Taquino, & Gill, 2003; Schneider, 2002). Likewise, a low level of social capital is linked to prolonged welfare dependency and food insecurity (Henderson & Tickamyer, 2008). On the other hand, Pichler and Wallace (2009), as well as Seo (2005), suggest that social capital has little, if any, influence on the economic well-being of the studied population. Moreover, other studies (Adato, Carter, & May, 2006; Chantarat & Barrett, 2008; Livermore & Neustrom, 2003) yielded findings that social capital can actually have a detrimental impact on various indicators of economic welfare, including economic mobility, employment, and productivity.

In addition, the literature provides mixed results regarding the relative effects of social and human capital on

economic well-being. For example, there is evidence that social capital has a larger effect than human capital on economic well-being (Abdul-Hakim, Abdul-Razak, & Ismail, 2010; Fafchamps & Minten, 2002; Narayan & Pritchett, 1999). In contradistinction, Rupasingha and Goetz (2007) arrived at a conspicuously different conclusion as they reported that human capital has a larger impact on economic welfare than does social capital.

It is evident that the body of knowledge surrounding social capital and its influence on economic mobility and advancement is anything but unequivocal, as is our understanding of the comparative magnitude of the effects of both social and human capital on economic mobility and welfare. In light of the present evidence, the purpose of this study is to: (a) evaluate the effect of social capital in the form of social networks and social support (these concepts are operationalized below) on the economic well-being of the population of Canada; (b) evaluate the effect of human capital in the form of educational attainment and health status on the economic well-being of the population of Canada; and (c) compare the magnitude of effects that both social and human capital have on the economic well-being of the population of Canada.

Canada is a particularly relevant nation for examining these issues outlined above, since beginning in the mid-1990s the nation underwent substantial policy reforms which resulted in the federal government eliminating national standards for social welfare programs and delegating greater authority to the provinces for designing and implementing their own safety nets (Habibov & Fan, 2008, 2010; Weaver, Habibov, & Fan, 2010). As discussed below, this major restructuring of the Canadian welfare state resulted in a greater emphasis on people's capacity to prosper within the market economy and thus amplified the importance of implementing effective strategies for promoting socio-economic advancement. Thus, the results of this study contain important policy implications for Canada and potentially for other nations whose social welfare systems underwent similar transformations.

Moreover, in this study we are aligned with Rose (2000), who suggests that although theories of human and social capital may differ in their emphasis, they are not contradictory. In other words, we propose the suitability of a composite

theory which avoids the exclusivity of either the human capital or social capital approach. Consequently, the specific research questions we address in this study are the following:

> *Research Question 1:* Does social capital in the form of social networks and social support positively affect the economic well-being of the Canadian population?
> *Research Question 2:* Does human capital in the form of educational attainment and positive health status positively affect the economic well-being of the Canadian population?
> *Research Question 3:* Does social capital in the form of social networks and social support have a larger effect on the economic well-being of the Canadian population than human capital in the form of educational attainment and positive health status?

By addressing the above-articulated questions, this study contributes to the existing literature in the following ways. First, we expand the knowledge base pertaining to the influence of social capital on economic welfare. As noted above, the findings of previous studies pertaining to the relationship between social capital and economic well-being are mixed, that is, some suggest social capital positively affects economic welfare while others provide contradictory evidence. Second, we build on previous studies in that we include ten social network and social support dimensions. Also, to our knowledge, no other study has included telephone and internet communication when measuring frequency of contact with social networks such as relatives and friends. Thus, our use of a wide range of social networks and social support indicators allows for a more comprehensive assessment of social capital by providing valuable information on what specific aspects of social capital may promote economic advancement. Third, we incorporate standardized regression coefficients into our analyses. This allows us to directly compare the magnitude of the effects of social and human capital on economic well-being (Leroux & Wright, 2010; Long & Freese, 2006). As discussed above, the literature in this area also yields mixed findings, so this study can provide a meaningful contribution to the scholarly conversation regarding how the influence that social capital may have on wealth-building compares to the influence of human

capital. Thus, the results of this study can inform policymakers and program planners on how to design and implement interventions that can effectively promote economic well-being and advancement. Fourth, our use of data from a nationally representative survey allows us to generalize our findings to the entire population inhabiting Canada's ten provinces. This increases the likelihood that our findings can inform social welfare observers both inside and outside of Canada.

Method

Data

The General Social Survey (GSS) was established in 1985 by Statistics Canada, the country's national statistical authority. The GSS is an annual cross-sectional multitopic nationally-representative survey of the Canadian population. The GSS is designed to gather information regarding living conditions and the well-being of the Canadian population, as well as to supply data to inform particular policy issues. Every year Statistics Canada conducts a new cycle of the GSS. Every cycle consists of a core questionnaire that includes basic socio-demographics such as age, sex, education and income levels. In addition, every cycle has a specific focus such as quality of life after retirement in cycle 9, education and work history in cycle 15, and fertility and family intentions in cycle 20. In this study, we use cycle 22 of the GSS which specifically focuses on social engagement and social networks (Statistics Canada, 2010).

The data for cycle 22 of the GSS were collected in 5 waves from February to November 2008. Computer assisted telephone interviewing (CATI) was used to collect the data for this cycle, as households were selected by using a random digit dialing (RDD) method. The target population was residents of all ten Canadian provinces and the sample size was 20,041. Each of the ten provinces were divided into strata, that is, distinct geographic regions, with Census Metropolitan Areas (CMAs) such as Toronto and Montreal each being considered separate strata. The non-CMAs of each province were grouped to form ten strata, leading to 27 strata in all. Survey estimates were weighted to represent all persons in the target population, including those without telephones. Consequently, the GSS data set provides sampling weights which were used to

make the results of our study representative of the total population of all ten Canadian provinces (Statistics Canada, 2010).

Dependent Variable

Economic well-being is the dependent variable in this study. Economic well-being is represented by the respondent's personal income. The GSS records the respondent's personal income in the form of an ordinal-level scale with 12 categories ranging from 1 = *No income* to 12 = *$100,000 or more.*

Independent Variables

Social networks and social support. In this study we based our selection of social capital variables on the measurement of social capital developed by the United Kingdom's Office for National Statistics (ONS). The ONS established a Social Capital Working Group in order to develop an operational measure of social capital that could be adopted by the UK government. A primary dimension of social capital as delineated by the ONS Working Group is *social networks and social support.* This refers to various indicators such as number of friends and relatives, frequency in seeing and speaking to friends and relatives, virtual networks, and being able to identify reliable people who can provide help when needed (Harper, 2002). It was these indicators of social networks and social support which informed our selection of social capital variables for this study.

Given our above-mentioned focus on social networks and social support, our variables pertained primarily to informal ties, that is, friends and relatives. We utilized a total of ten social capital variables in this study. These ten variables included two continuous variables, which were the number of close relatives and the number of close friends the participants had, and eight categorical variables. The categorical variables consisted of frequency in seeing relatives and friends during the past month (with once a week or more considered *frequent*), and if participants often communicated with their relatives and friends over the phone and over the internet (with once a week or more considered *often*). Furthermore, the participants were asked if they had plenty of people to rely on when they had a problem and if they often felt rejected.

Human Capital and Demographic. We also included several human capital and demographic variables as independent variables. The human capital variables we selected were educational level and health status, while age and gender were the demographic variables. To assess the effect of education, we created two dummy variables which indicated if respondents possessed a college diploma or Bachelor's level or higher university degree. To assess health status, we created a dummy variable which indicates if respondents reported their health status to be *good*. In order to ascertain the effects of age, we created dummy variables which represent the following categories: ages 15–34, 35-54, and 55-74. Finally, as a means of assessing the role of gender, we created a *female* dummy variable that represents female respondents.

The effect of the above-discussed variables on the economic well-being of the Canadian population is well-documented. For instance, starting with 15 years of age, the average income for residents of Canada rises steadily until the age range of 45-64 years. From age 65 years and onward the average income declines (Statistics Canada, 2006). As far as gender and education level, the average earnings of men continue to outpace women's earnings and education level is positively associated with income (Hick, 2007; Schiller, 2003; Seccombe, 2000). Moreover, health status is linked with income in that persons with health problems are more likely to have lower incomes than persons with a more favorable health status (McIntosh, Finès, Wilkins, & Wolfson, 2009; Raphael, 2007). Based on these studies, we expected that a higher level of educational achievement, better health, and being a male would all be associated with higher personal income, while income would grow with age from 15-34 to 35-54 and then steadily decline.

Analytical Strategy

There were two primary steps in our analytical strategy. First, we calculated descriptive statistics for the independent variables. The discrete-level variables were reported in percentages while the continuous-level variables were reported using means and standard deviations. Second, we used multivariate analysis to estimate which independent variables were associated with an increase in the participants' personal income.

This involved estimating a total of ten regression models, with each model containing one of the ten social network and support variables used in this study, along with all of the selected human capital and demographic variables. Because our dependent variable, the respondent's level of personal income, is categorical and ordered, ordinal logistic regression models were estimated. Since an ordinal logistic regression model is non-linear in terms of outcome probabilities, we utilized several approaches to assess the relationships between the independent and dependent variables (Long & Freese, 2006). As is customary, we commenced with an estimation of the regression coefficients. The standard interpretation of regression coefficients in an ordered logistic model is that for a one unit increase in the independent variable the dependent variable level is expected to change by its respective regression coefficient in the ordered log-odds scale. Given that the interpretation of regression coefficients within an ordered logistic model is not intuitive, we converted regression coefficients to odds ratios which can be more easily interpreted. The interpretation pertains to how the odds for reporting a higher income change as a result of a one unit increase or decrease in the independent variable. In addition, we used the SPost statistical add-on to the Stata software developed by Long and Freese (2006) to convert regression coefficients to standardized regression coefficients. Standardization of the coefficients was done in order to determine which of the independent variables had a greater effect on the dependent variable if the variables differed in terms of level of measurement. In this study education and gender were measured as binary variables, number of friends was measured as a continuous variable, while the dependent variable, economic well-being, was measured as a categorical ordered variable. Thus, using standardized coefficients allowed us to directly compare the effect of the various independent variables on the participants' reported incomes, regardless of their level of measurement (Leroux & Wright, 2010; Long & Freese, 2006).

In order to address multicollinearity, we utilized the method employed by Habibov and Fan (2008) in which we conducted ordinal logistic regression between each individual predictor that yielded significant results within the full model and the outcome variable and then noted the sign of the

Table 1. Descriptive Statistics for the Sample

Variables	Binary variables (%)	
	Yes	No
Human capital		
Age 15-34	23.07	76.93
Age 35-54	36.81	63.19
Age 55-74	30.57	69.43
Age 75 and older	9.60	90.40
Female	56.68	43.32
College diploma	27.19	72.81
University Degree	24.44	75.56
Good health	82.06	17.94
Married	47.62	52.38
Social network		
Seen relatives frequently	46.38	53.62
Seen friends frequently	65.90	34.10
Often communicate to relatives over the phone	71.07	28.93
Often communicate to relatives over the internet	31.82	68.18
Often communicate to friends over the phone	64.62	35.38
Often communicate to friends over the internet	41.25	58.75
Plenty people to rely on, when I have problem	79.02	20.98
I often feel rejected	4.06	95.94
	Continuous variables	
Social network (range 0-200)	Mean	Std Dev
Number of close relatives	6.277022	10.0952
Number of close friends	7.469239	10.6564

Note: Data are rounded up.

regression coefficient. Any predictor variable whose coefficient in the full model was in the opposite direction from its coefficient in the one-by-one regression would be considered multicollinear. There was no evidence of multicollinearity in any of the regression models estimated in this study.

Results

Table 1 provides the descriptive statistics for the sample. The greatest proportion (36.81%) of the participants was between 35 and 54 years of age and nearly 57% were female. Approximately 82% of the participants reported being in good health and 24.44% had earned at least a Bachelor's degree. In terms of their social capital, a very small proportion (4.06%) of participants reported often feeling rejected and 79.02% reported they had plenty of people to rely on when they had a problem. Nearly 66% of the participants saw their friends frequently during the month prior to their responding to this survey and 46.38% frequently saw their relatives during the same time period. The majority of participants reported they often communicated with their relatives and friends over the phone, while a minority stated they often communicated with the same social networks through the internet.

Let us now turn to the results of our logistic regression analyses. Table 2 provides the results of Models 1 – 4, with each model containing one social capital variable which pertained to the number of close relatives and friends the participants had and how frequently they saw them, along with all of the human capital and demographic variables described above.

Beginning with Model 1, the results indicated that for each additional close relative there was an increased likelihood for participants to have a high income after holding constant the other variables in the model. In Model 2, each additional close friend increased the likelihood that participants would report a high income after holding the other variables in the model constant. The Model 3 results revealed that participants who reported seeing their relatives frequently demonstrated a higher likelihood of having a high income after holding constant the other variables in the model. As for Model 4, the social capital variable of seeing friends frequently was not associated with changes in the participants' income.

In all four models reported in Table 2, both the human capital and the demographic variables were associated with changes in the participants' income. Being younger (aged 15 – 34) and female predicted a lower income. On the contrary, being 35 – 54 or 55 – 74, having a diploma/certificate or a

Table 2. Number of Friends and Relatives and Frequency of Meeting Them (table continues on next page)

	Model 1			Model 2		
Variables	Odds Ratio	Coeff	Std Coeff	Odds Ratio	Coeff	Std Coeff
Human capital block of independent variables						
Age 15-34	.4466***	-.806***	-.1756	.4520***	-.794***	-.1727
	(.0278)	(.0623)		(.0279)	(.0619)	
Age 35-54	1.940***	.663***	.1482	1.973***	.680***	.1517
	(.1141)	(.0588)		(.1152)	(.0584)	
Age 55-74	1.157**	.146*	.0278	1.168***	.155**	.0296
	(.0676)	(.0584)		(.0676)	(.0579)	
Female	.3306***	-1.107***	-.2539	.3303***	-1.107***	-.2539
	(.0116)	(.0352)		(.0116)	(.0352)	
College diploma	2.652***	.976***	.2002	2.663***	.980***	.2008
	(.1057)	(.0391)		(.1059)	(.0398)	
University Degree	6.545***	1.879***	.3785	6.550***	1.880***	.3786
	(.3231)	(.0494)		(.3221)	(.0492)	
Good health	1.738***	.553***	.0890	1.736***	.552***	.0890
	(.0831)	(.0478)		(.0824)	(.0475)	
Social network block of independent variables						
Number of close relatives	1.003*	.003*	.0160			
	(.0015)	(.0015)				
Number of close friends				1.006**	.006**	.0256
				(.0019)	(.0019)	
Seen relatives frequently						
Seen friends frequently						
Log pseudolikelihood	-36145.4			-36308.9		
Wald Chi Squared	3562.7			3610.8		
Degree of freedom	8			8		
Prob > chi2	0.0000			0.0000		
Number of cases	16,175			16,254		

Note: Standard Errors in parenthesis. * p<0.05, ** p<0.01, *** p<0.001 . Std Coeff = Standardized coefficients. The results of estimation are adjusted by using national sampling weights.

university degree, and reporting good health all increased the participants' likelihood of earning a high income.

Please refer to Table 3 for the results of the estimations in Models 5 – 8. Each one of these models included one social capital variable that focused on the type and intensity of contact with either relatives or friends as well as all of the human capital and demographic variables described above.

Table 2. Number of Friends and Relatives and Frequency of Meeting Them (continued from previous page)

	Model 3			Model 4		
Variables	Odds Ratio	Coeff	Std Coeff	Odds Ratio	Coeff	Std Coeff
Human capital block of independent variables						
Age 15-34	.4562***	-.785***	-.1707	.4527***	-.792***	-0.1726
	(.0279)	(.0612)		(.0277)	(.0613)	
Age 35-54	1.978***	.682***	.1524	1.959***	0.673***	0.1504
	(.1142)	(.0577)		(.1130)	(.0577)	
Age 55-74	1.166**	.154**	.0293	1.1625***	.151**	0.0287
	(.0665)	(.0571)		(.0663)	(.0570)	
Female	.3247***	-1.125***	-.2580	.3291***	-1.111***	-0.2550
	(.0114)	(.0351)		(.0115)	(.0350)	
College diploma	2.642***	.972***	.1993	2.648***	.974***	0.1999
	(.1051)	(.0398)		(.1052)	(.0397)	
University Degree	6.529***	1.876***	.3779	6.478***	1.868***	0.3767
	(.3203)	(.0491)		(.3186)	(.0492)	
Good health	1.736***	.552***	.0890	1.745***	.557***	0.0899
	(.0819)	(.0472)		(.0823)	(.0472)	
Social network block of independent variables						
Number of close relatives						
Number of close friends						
Seen relatives frequently	1.176***	.162***	0.0369			
	(.0400)	(.0341)				
Seen friends frequently				.9640	-.0366	-0.0079
				(.0344)	(.0357)	
Log pseudolikelihood	-36621.7			-36638.1		
Wald Chi Squared	3640.1			3595.1		
Degree of freedom	8			8		
Prob > χ^2	0.0000			0.0000		
Number of cases	16,391			16,391		

Note: Standard Errors in parenthesis. * p<0.05, ** p<0.01, *** p<0.001 . Std Coeff = Standardized coefficients. The results of estimation are adjusted by using national sampling weights.

The results of Model 5 indicated that participants who often communicated with relatives over the phone exhibited a greater likelihood for reporting a high income, *ceteris paribus*, while Model 6 yielded a finding that often communicating with relatives over the internet increased the likelihood of participants having a high income, again after holding constant all of the other variables in the model. As evinced by Model 7, often communicating to friends over the phone did not

influence the participants' income. In Model 8, however, often communicating with friends over the internet was associated with a greater likelihood of the participants having a higher income after holding constant the other variables in the model.

Table 3. Intensity of Contacts with Relatives and Friends
(table continues on next page)

Variables	Model 5			Model 6		
	Odds Ratio	Coeff	Std Coeff	Odds Ratio	Coeff	Std Coeff
Human capital block of independent variables						
Age 15-34	.4562***	-.785***	-.1702	.4187***	-.870***	-.1891
	(.0278)	(.0611)		(.0259)	(.0620)	
Age 35-54	1.942***	.664***	.1479	1.866***	.624***	.1393
	(.1122)	(.0578)		(.1081)	(.0579)	
Age 55-74	1.159**	.148**	.0280	1.121*	.114*	.0217
	(.0663)	(.0572)		(.0639)	(.0571)	
Female	.3128***	-1.162***	-.2658	.3210***	-1.136***	-.2603
	(.0110)	(.0354)		(.0113)	(.0352)	
College diploma	2.603***	.957***	.1957	2.600***	.956***	.1958
	(.1040)	(.0400)		(.1039)	(.0400)	
University Degree	6.359***	1.850***	.3716	6.208***	1.826***	.3673
	(.3124)	(.0491)		(.3084)	(.0497)	
Good health	1.724***	.545***	.0877	1.718***	.541***	.0872
	(.0813)	(.0472)		(.0809)	(.0471)	
Social network block of independent variables						
Often communicate to relatives over the phone	1.406***	.341***	.0729			
	(.0545)	(.0388)				
Often communicate to relatives over the internet				1.283***	.250***	.0542
				(.0493)	(.0385)	
Often communicate to friends over the phone						
Often communicate to friends over the internet						
Log pseudolikelihood	-36573.6			-36604.3		
Wald Chi Squared	3681.8			3651.6		
Degree of freedom	8			8		
Prob > χ^2	0.0000			0.0000		
Number of cases	16,391			16,391		

Note: Standard Errors in parenthesis. * p<0.05, ** p<0.01, *** p<0.001 . Std Coeff = Standardized coefficients. The results of estimation are adjusted by using national sampling weights.

Table 3. Intensity of Contacts with Relatives and Friends (continued)

Variables	Model 7			Model 8		
	Odds Ratio	Coeff	Std Coeff	Odds Ratio	Coeff	Std Coeff
Human capital block of independent variables						
Age 15-34	.4449***	-.810***	-.1763	.3941***	-.931***	-.2024
	.0275	(.6181)		(.0256)	(.0650)	
Age 35-54	1.949***	.668***	.1492	1.833***	.606***	.1354
	.1125	(0.057)		(.1073)	(.0585)	
Age 55-74	1.161***	.150**	.0285	1.120*	.114*	.0217
	.0661	(.0570)		(.0639)	(.0571)	
Female	.3280***	-1.115***	-.2559	.3227***	-1.131***	-.2591
	.0115	(.0352)		(.0114)	(.0355)	
College diploma	2.650***	.975***	.2000	2.632***	.968***	.1984
	.1053	(.0397)		(.1049)	(.0399)	
University Degree	6.480***	1.869***	.3767	6.219***	1.828***	.3678
	.3188	(.0492)		(.3096)	(.0498)	
Good health	1.739***	.553***	.0894	1.711***	.537***	.0866
	.0819	(.0471)		(.0808)	(.0472)	
Social network block of independent variables						
Often communicate to relatives over the phone						
Often communicate to relatives over the internet						
Often communicate to friends over the phone	1.049	.0484	.0106			
	.0376	(.0358)				
Often communicate to friends over the internet				1.248***	.222***	.0508
				(.0485)	(.0389)	
Log pseudolikelihood	-36637.5			-36612.3		
Wald Chi Squared	3596.7			3626.3		
Degree of freedom	8			8		
Prob > χ^2	0.0000			0.0000		
Number of cases	16,391			16,391		

Note: Standard Errors in parenthesis. * p<0.05, ** p<0.01, *** p<0.001 . Std Coeff = Standardized coefficients. The results of estimation are adjusted by using national sampling weights.

In all four models reported in Table 3, both the human capital and the demographic variables were again associated with changes in the participants' income. For example, being aged 15 – 34 and a female increased the likelihood of

participants having a lower income. By contrast, being aged 35 – 54 or 55 – 74, earning a college diploma or a university degree, and being in good health were all associated with a greater likelihood of their reporting a high income.

Table 4. Having People to Rely on or Having Been Often Rejected

	Model 9			Model 10		
Variables	Odds Ratio	Coeff	Std Coeff	Odds Ratio	Coeff	Std Coeff
Human capital block of independent variables						
Age 15-34	.4458***	-.808***	-.1757	.4510***	-.796***	-.1732
	(.0276)	(.0615)		(.0276)	(.0614)	
Age 35-54	1.976***	.681***	.1522	1.966***	.676***	.1511
	(.1136)	(.0581)		(.1136)	(.0578)	
Age55-74	1.167***	.154**	.0294	1.168**	.155**	.0296
	(.0668)	(.0574)		(.0668)	(.0572)	
Female	.3254***	-1.123***	-.2573	.3294***	-1.110***	-.2546
	(.0115)	(.0351)		(.0115)	(.0351)	
College diploma	2.644***	.972***	.1993	2.638***	.970***	.1989
	(.1049)	(.0397)		(.1049)	(.0398)	
University Degree	6.529***	1.876***	.3777	6.434***	1.862***	.3750
	(.3167)	(.0491)		(.3167)	(.0492)	
Good health	1.689***	.525***	.0846	1.680***	.519***	.0837
	(.0808)	(.0474)		(.0808)	(.0481)	
Social network block of independent variables						
Plenty people to rely on, when I have problem	1.281***	.248***	.0456			
	(.0574)	(.0430)				
I often feel rejected				.6361***	-.452***	-.0371
				(.0574)	(.0904)	
Log pseudolikelihood	-36613.0			-36621.5		
Wald Chi Squared	3640.6			3605.8		
Degree of freedom	8			8		
Prob > χ^2	0.0000			0.0000		
Number of cases	16,391			16,391		

Note: Standard Errors in parenthesis. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Std Coeff = Standardized coefficients. The results of estimation are adjusted by using national sampling weights.

Table 4 delineates the estimations for Models 9 and 10, both of which included the same set of human capital and demographic variables found in the previous models and one specific social capital variable. Model 9 results indicate there was a greater likelihood that participants would report having a high income when, after holding constant all of the other variables in the model, they indicated they had plenty of people to rely on when they had a problem. Model 10 results indicate that

participants who reported they often felt rejected by others exhibited a greater likelihood for reporting a lower income, *ceteris paribus*. Also, the relationship between all of the human capital and demographic variables and the participants' income levels detected in Models 1 – 8 were the same in Models 9 and 10. Moreover, the direction of the relationships was equivalent, as the lowest age category and being female were associated with an increased likelihood of having a lower income. In comparison, the other age categories, educational attainment in the form of a college diploma/university degree and good health all increased the likelihood of reporting a high income.

Of the significant social capital variables in all of the estimated models, economic well-being was most profoundly influenced by often communicating with relatives over the phone (a standardized coefficient of .0729 in Model 5), followed by often communicating with relatives over the internet (a standardized coefficient of .0542 in Model 6), and often communicating with friends over the internet (a standardized coefficient of .0508 in Model 8).

We also considered the standardized coefficients for the human capital and demographic variables and we observed that in all 10 estimated models having a university degree had a stronger effect on economic well-being than all of the variables, both social capital and demographic. Being female had the second largest effect on economic well-being amongst all of the independent variables in all models, but in the opposite direction—that is, female participants were more likely to report lower incomes. Having a college diploma, which was positively associated with earned income, had the third largest effect on economic well-being amongst all of the independent variables in all of the models.

Discussion and Conclusion

The analyses conducted in this study allowed us to answer the three research questions listed above. In regards to the first research question, we determined that in eight of the ten estimated models social capital in the form of social networks and social support was positively associated with individual income. This result is in accord with several previous studies

(Brisson, 2009; Lévesque, 2005; Parisi et al., 2003) which suggested that the acquisition or presence of social capital was associated with favorable economic outcomes. However, our consideration of social networks and social support in a multidimensional manner demonstrated that the effect of social capital on income varied by the type of social capital dimension. For instance, both the number of close relatives and close friends were positively associated with income, but in terms of frequency in seeing these respective network types, only the frequency in seeing relatives was associated with income. Likewise, frequency in communicating with relatives over the phone was positively associated with income, but there was no relationship between communicating with friends over the phone and income. These findings suggest that while both close relatives and close friends are important social networks, a higher frequency in communicating with friends may denote contact with a large number of casual acquaintances that have little influence on one's economic well-being.

When it came to frequency in the participants' communicating with relatives and friends over the internet, however, a positive association with income was detected for both network types. Moreover, as indicated above, frequency in communicating with relatives and friends over the internet had the second and third largest effect on income, respectively, out of all of the social capital variables utilized in this study. This suggests that frequency of communicating over the internet is a determinant of income, regardless of the network type or even if the person with whom one is communicating is not considered a "close" relative or friend.

During the past decade, the internet has cemented its status as a highly effective means of communication through a variety of methods, including email, listservs, online chatting, instant messaging, and blogging. These interpersonal interactive functions allow people to go online and communicate with others at a relatively low cost, irrespective of physical distance. Thus, the internet facilitates the creation of virtual networks of people who may communicate with each other and yet differ on a variety of characteristics, including ethnicity, socio-economic status, and political affiliation (Lee & Lee, 2010).

It is this potential of the internet to cultivate communicative relationships between people who have a wide range of

backgrounds and experience that may help explain why we found the positive relationship between frequency of communication over the internet and income. In other words, people who communicate with others more frequently over the internet may be more apt to establish relationships with others who have a wide range of backgrounds and experiences and who are willing to exchange helpful information that can promote social and economic mobility. On the other hand, it may be the case that those who communicate over the internet on a more regular basis have a higher level of aptitude for informational technology, which can translate into greater earnings in the present-day knowledge economy (Dolton, Makepeace, & Robinson, 2007). Clearly, more research in this area is warranted.

As for our second research question, in all ten models human capital in the form of educational attainment and positive health status were positively associated with income. As was the case with our first research question, our findings for the second research question are supported by the literature (Pichler & Wallace, 2009; Schiller, 2003; Seo, 2005). As discussed below, this strengthens the argument that a strong commitment to human capital investments is necessary for promoting poverty reduction and economic advancement.

By addressing our third research question, which considers if social capital has a larger effect on economic well-being than does human capital, our contrary finding provides a meaningful contribution to the body of literature that considers the impact of both social and human capital. As highlighted above, previous studies have yielded mixed and inconsistent results about the relative effect of social and human capital on economic well-being. Hence, we estimated ten multivariate regression models with the same set of human capital and demographic variables and ten different social capital variables in the form of social networks and social support. In all ten models, our analyses of standardized coefficients indicated that human capital in the form of educational attainment and positive health status had a larger effect on income than any of the social capital variables we selected.

This finding provides a noteworthy implication for social policy in developed countries, including Canada, which are

influenced by the idea of a so-called "social investment state," in which emphasis shifts from the traditional welfare state's focus on social protection from market risks to the enhancement of human capital (Blair, 1998; Chappell, 2010; Giddens, 1998). As Giddens (1998) articulates, the main goal of this shift is to ensure the "investment in human capital wherever possible, rather than direct provision of economic maintenance. In place of the welfare state we should put the social investment state" (p. 117). Thus, from this perspective, social spending should be shifted from traditional social welfare programs to programs aimed at increasing human capital through education, training, and work experience, and our finding of the relatively larger effect of human capital on income tentatively lends further credence to the notion of a social investment state (Banting, 2005; Greenberg, 2011). It should be noted, however, that this shift away from the traditional welfare state has increased economic inequality and poverty and impeded the cultivation of social capital within local communities and families (Banting, 2005; Hammer, 2004; Roberts & Devine, 2003).

Against this backdrop, our findings shed an important light on the present-day policy context. Recall that in our estimations both human and social capital variables were positively associated with income, as in eight of the ten models a positive effect of social capital on income was detected, even after the effect of the human capital and demographic variables were taken into account. This suggests that, alongside a substantial commitment to human capital investments, the policy community should incorporate social work and human service interventions that can increase social capital (Pinto, 2006; Schneider, 2006) and thereby reduce poverty. In other words, our findings imply that policymakers, in this era of welfare state transformation, should not overlook the importance of social capital when designing programs that further the knowledge and skill sets of the populace.

Limitations and Future Studies

This study has important implications both for social policy in general and social work practice in particular. It should be noted, however, that the cross-sectional nature of this study precludes us from making causal inferences between social

and human capital and economic mobility—only associative relationships may be established. Hence, further studies in this area should include longitudinal designs that are more conducive to the establishment of causal inferences.

As noted above, further studies could also focus on better understanding the relationship between internet communication and its potential for enhancing economic welfare. With the steady growth of online populations and the expansion of the internet's relatively inexpensive interactive applications, it is crucial that we gather a more comprehensive understanding of the role electronic communication can play in poverty reduction strategies.

Finally, this study considered social networks and social support, but there are a variety of other social networks measures that could be incorporated into future studies which assess the relationship between social capital and economic welfare. For instance, the social network dimension of social capital not only includes informal ties such as family and friends, but also generalized relationships with civic groups and associations as well as institutional relationships, which are the associations people have with a variety of formal representatives, including those from government, the legal system, police services, unions, and universities (Yusuf, 2008). Empirically testing the impact of the various social networks outlined above on income could provide findings that make an important contribution to the literature.

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